

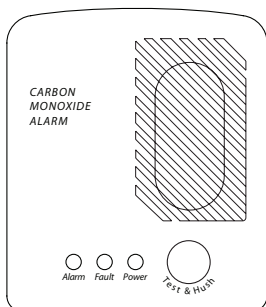
CN-1231 with Relay Base

9V DC CARBON MONOXIDE (CO) ALARM

WITH ALARM RELAY OUPUT

OWNER'S MANUAL

CAUTION : READ THESE INSTRUCTIONS CAREFULLY BEFORE OPERATING OR SERVICING. PLEASE LEAVE A COPY TO THE END USER.



IMPORTANT !

THIS IS NOT A SMOKE ALARM! This CO alarm is designed to detect carbon monoxide from ANY source of combustion. It is NOT designed to detect smoke, fire, or any other gas.

WARNING ! This product is intended for use in ordinary indoor locations of family living units. Do not expose to rain or moisture. The detector will not protect against risk of carbon monoxide poisoning when the battery is flat. Do cover the alarm when decorating. REMEMBER to uncover the unit when decoration is finished (excessive fumes from paints, solvents, cleaning agents, etc. may damage or deteriorate sensor). The CO alarm shall not be seen as a substitute for proper servicing of fuel-burning appliances, or the sweeping of chimneys.

WARNING ! THIS ALARM CONFORMES TO BSEN50291:2001 MAY NOT PROTECT INDIVIDUALS FROM THE ACUTE EFFECTS OF CARBON MONOXIDE EXPOSURE. IT WILL NOT FULLY SAFEGUARD INDIVIDUALS WITH SPECIFIC MEDICAL CONDITIONS. IF IN ANY DOUBT, CONSULT A MEDICAL PRACTITIONER.



NEVER IGNORE THE CO ALARM

CO is called the “silent killer” because it is an invisible, odorless, tasteless gas produced when fossil fuels do not burn completely, or are exposed to heat (usually fire). These fuels include: Wood, coal, charcoal, oil, natural gas, gasoline, kerosene, and propane. Electrical appliances typically do not produce CO.

Many cases of reported CO poisoning indicate that while victims are aware they are not well, they become so disoriented, that they are unable to save themselves by either exiting the building or calling for assistance.

Be aware that CO poisoning may be the cause of flu-like symptoms such as headaches, tightness of chest, dizziness, fatigue, confusion and breathing difficulties. Because CO poisoning often causes a victim's blood pressure to rise, the victim's skin may take on a pink or red cast. Extreme exposure to CO can cause brain damage, death.

WARNING: EXPOSURE TO HIGH LEVELS OF CARBON MONOXIDE CAN BE FATAL OR CAUSE PERMANENT DAMAGE AND DISABILITIES.

COMMON RISKS FOR CO POISONING

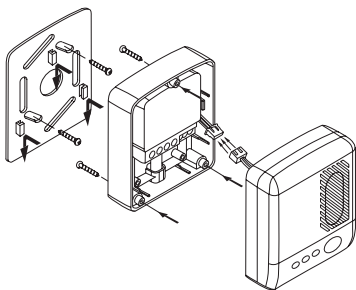
- Technical problems with equipment, depending on faults, lack of service or maintenance.
- Faulty chimney or ventilation pipe which can have fallen or clogged (e.g. bird nest, snow, etc.)
- Faulty ventilation direction of air, so called back draught.
- Faulty installation of burner.
- In equipment which is used regularly; for shorter periods of time, or by different people.
- Chimneys of the wrong size etc.
- Garden grills which are used indoors.



INSTALLATION:

CAUTION: DO NOT INSTALL THE ALARM IN NEW OR RENOVATED BUILDINGS UNTIL ALL WORK IS COMPLETED, INCLUDING PAINTING AND FINAL CLEANING (EXCESSIVE FUMES FROM PAINTS; SOLVENTS, MAY CAUSE DAMAGE AND DIRT OR DEBRIS MAY BLOCK THE GAS ENTRY).

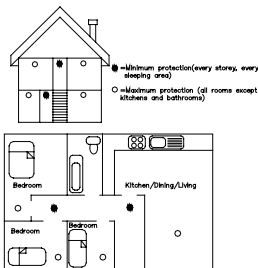
The CO Alarm is designed for easy installation. It comes completely with mounting kit. All you have to do is attach the mounting bracket to the wall with the fixing screws provided.



1. Loosen the mounting bracket by pushing it upwards and then fasten it onto the ceiling/wall with the enclosed screws.
2. Connect the battery with + ve and – ve in the correct position and close the battery cover.
3. Connect snap contact to relay base and all connecting wires through the cable entry.
4. Fix CO alarm to the relay base with the screws provided.
5. Hook the relay base on bracket until it locks in place. Now, test the alarm by pressing in the test button for a few seconds until the alarm sounds.

Warning: Wiring should be installed only by a qualified electrician.

LOCATION – WHERE TO INSTALL CO ALARM



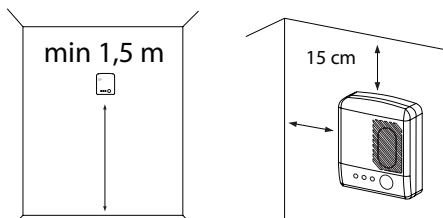
- Minimum Protection
- Added Protection

- The alarm should be installed in every level of your home, preferably in every room. If this is not possible, install at least one alarm near or within

each separate sleeping area.

- If more than one sleeping area or the bedroom doors are closed during the night, you may need more than one CO alarm
- For added protection, install at least one CO alarm in each level of the home and at the top of the basement stairs.
- Install an additional CO alarm at least 6 meter (20 feet) away from the furnace or fuel burning heat source or appliance.
- CO alarm is available for boats and recreational vehicles.

IMPORTANT: CO alarm should be placed where you will hear it while sleeping.



- In normal environment, wall mounted at least 1.5 meter (6 feet) from the floor is recommended.
- If on wall position, at least 150mm (6 inch) below the ceiling.
- If ceiling position, at least 300mm (12 inch) from any wall.
- Higher than any door or window frame.

WARNING! The unit does not work without power. CO alarm is an early warning device, no more, no less. **DO NOT PAINT** the alarm.

WHERE NOT TO INSTALL CO ALARM

- Within 1.5m (5 feet) of any gas appliance as furnace.
- In any high level of dusty, dirty or greasy area
- In damp or very humid areas, outdoor room or next to bathroom, at least installed the alarm 3 meters (10 feet) away from the bathroom.
- In very cold or very hot area where the temperature could not be less than -10°C or greater than 40°C.
- Humidity is less than 30% RH or more than 90% RH.
- In direct sunlight and direct above a sink or cooker.
- Behind drapes, curtains, furniture or other obstruction.
- In unheated basements or garages.
- In location where they are exposed to chemical solvents or cleaners.
- Near vents, flues and chimneys.
- Near heating and cooking appliances.
- In turbulent air, like near ceiling fans, heat vent, air conditioners, fresh air return, or near the open window, because of the blowing air may delay CO from reaching the alarm.

OPERATING AND TESTING CO ALARM

When the battery is installed, Green LED will flash once indicating the alarm is powered and wait for about 1 minute to stabilize the sensor before testing the unit. To test the unit, press and hold the button until the repeating series of 4 beeps sound with Red LED flashes. When the button is released, the siren will stop.

Check and test the CO alarm after installation. Ensure that you can clearly hear the CO alarm in sleeping area. It should be tested weekly and check after re-occupation following a holiday.

Check that Green LED flashes about every minute to ensure the unit is in operating mode.

If the Green LED is not flashing once per minute, or the unit does not respond to the test button:

1. Make sure the unit contains the recommended type of battery
2. Ensure the battery is installed correctly.
3. Make sure the unit has been cleaned adequately.
4. Check for obvious damage.

If the alarm still fails to work, it must be replaced immediately. Do not attempt to repair it yourself, warranty will be void.

Note: The test push button is independent function with hush button. During the normal testing mode, the silence feature will not active.

ADDITIONAL FEATURES

The CO alarm comes with the following friendly additional features for use.

Silence feature - This feature can be used to silence nuisance alarms. Press test/silence button during alarm condition will silence the alarm signal for 4 minutes. If the CO surrounding level reaches 200 ppm, the alarm will reactivate. Observe that the Red LED repeatedly series 4 flashes during hush model last for 4 minutes. The unit will automatically return to normal mode after 4 minutes. If the concentration is increased, the silencer (hush) feature is by pass and the unit will alarm.

CAUTION : If the CO concentration at 200 ppm the silence feature does not activate. The user must be aware that if the alarms continually after push the silence button, the CO concentration surrounding the alarm could be 200 ppm or greater. Always determine why the alarm has been triggered before using the silence feature. If the case of alarm is not clear, assure that there is an actual CO leakage and evacuate the area.

Relay output – The relay with the CO alarm is mounted on is equipped with a latching relay output for connection with external equipment (N.O. and/or N.C.).

Interlink function - This alarm can be interlinked with up to 11 other alarms (12 in all) using the interlink terminal located next to the relay terminal on the relay base. When your CO-alarm receives a signal from other units it will be triggered to alarm as well and red LED will flash continuously. If you wish to silence the incoming alarm, press the silencer button and only the red LED will continue to flash.

Pre-alarm warning – when the unit detects CO level 40 ppm or greater, the Red LED will flash every 8 seconds until alarm.

Memory function - When a unit alarms due to CO or other reasons (not from test button), the memory function will be activated in the unit that has detected the CO and will be held for 12 hours. The indication of an alarm incidence being stored in the memory function consists of a short beep every 8 seconds. During this memory indication period, the normal operating and function of the unit is not affected and the user can reset/deactivate the memory function by pressing the test push button until an alarm sounds.

Self diagnostics – Automatically check the sensor every 8s to ensure of correct operating of alarm.

Low battery warning – When the battery power deteriorated, the unit will emit one beep with Yellow LED flash every minute to remind user to replace battery.

Fault warning – If a fault is detected, the unit will emit 2 beeps with Yellow LED flash every 8 seconds to indicate the sensor is fault or not working properly so CO alarm must be replaced.

End of alarm life warning – When the CO alarm comes to end of life, the unit will emit 3 beeps with Yellow LED flash every minute. When this happen, the CO alarm must be replaced.

Temporary delay warning signal – When the time to replace battery or end of life CO alarm warning occurs, the user can push the testbutton to temporarily disable low battery- or end of life- warnings for 12 hours to avoid beeing unnecessarily bothered by the signal especially in the middle of night. This is indicated by 3 flashes with Red LED. User may press test button to alarm again to deactivate function and return to warning mode at any time.

CO ALARM SOUNDS

1. If you hear the CO alarm sound or suspect that there is a gas leakage, never ignore it.
2. Move to fresh air immediately. Outdoors or open all windows and doors to allow the CO to disperse.

3. Call the Fire department immediately outside your home or premises/apartment.
4. Do a head count to check all persons are accounted for.
5. Do not re-enter the premises nor move away from the open door/windows until the emergency service responders have arrived, the premises have been aired out, and your alarm remain in its normal condition.
6. Call a qualified technician to examine and investigate for source of CO from fuel burning, equipment and applications, such as water heater, oven, clothes dryer, space heater, furnace or other source of combustion, such as gas log fireplace or kerosene burning stove or heater. Make sure that motor vehicles or truck are not, and have not been, operating in an attached garage or adjacent to the residence.

TECHNICAL INFORMATION

The CO alarm is calibrated to respond to the following levels of CO in accordance with EN50291 : 2001.

CO concentration in Air:	No alarm before:	Alarm before:
30 ppm	120 min.	-
50 ppm	60 min.	90 min.
100 ppm	10 min.	40 min.
300 ppm	-	3 min.

The battery lasts for over one year. About a month before the battery is completely flat, the alarm emits a short signal with Red LED flashes every minute. This is the signal that the battery needs replacement. The alarm works as normal during this time. Always test the alarm after changing the battery. Replace battery with GP1604A, Duracell MN1604, Energizer 522, Eveready 1222 and Ultralife U9VL-J type.

WARNING : Battery replacement should only be done by competent person.

HOME SAFETY GUIDE

- Make a floor plan indicating all doors and windows.
- Have a family meeting, discuss the escape plan and train them to leave your home when they hear the sound of the alarm.
- If you are on holiday, turn off appliances switches & the gas control valve.
- Do not place the bed near gas pipes or gas meter.
- Do not change the location of gas pipes by yourself.
- In order to ensure your home safety, please employ registered installers for regular safety inspection of all gas installation & appliances.
- Out of reach of children.
- Teach the children not to play with it or remove the battery for other purpose.

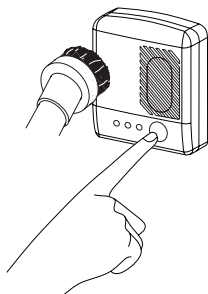
ALARM SIGNAL & LED INDICATION

Note : ■■■ represents “beep, beep, beep”

Detector Operation	Green	Red	Yellow	Alarmsignal
	Power indication	Alarm signal	Fault signal	
Normal Operation	Flash once per minute □	-	-	-
Alarm Condition	-	4 beeps + flash □	-	■■■■ -1s -■■■■ -1s -■■■■ ...
Silence (hush) mode under alarm condition	-	4 flashes □	-	-
Interlink signal input (slave)	-	beep + flash □	-	■■■■■■.....
To activate silence(hush) unit under interlink signal input	-	Flash □	-	-
Pre-alarm warning CO level (40 ppm or greater level detected)	-	Flash once every 8 seconds until alarm □	-	-
Memory function-indicates the alarm has been activated before(not from test button) due to whatever reason	-	-	-	■--8s--■--8s--■ 1 beep every 8 seconds last for 12 hours. Press button once to reset to normal mode
Low Battery Warning	-	-	1 beep + flash every minute □	■-1 min-■-1min-■.....
Sensor Fault	-	-	2 beeps + flash every 8 seconds □	■■-8s-■■-8s-■■-8s-.....
End of sensor lifetime warning	-	-	3 Beeps + flash every minute □	■■■-1min-■■■-1min-■■■.....
Temporary delay warning signal – (Push button to temporarily disable low battery- or end of life- warnings for 12 hours)	-	Flashes 3 times after a push of the button □ (Push button again to return to warning mode at any time)	-	-

MAINTENANCE

- Do not allow water or dust to contaminate the alarm.
- Test it at least once a week by using the test button.
- A vacuum cleaner hoses and vacuuming the openings on the alarm.
- Use a damp cloth to wipe the outside of the alarm.
- Never use cleaners, aerosol chemicals, solvents or cleaning solutions on your alarm since they may damage the unit.
- Test the alarm after vacuuming and cleaning.
- Check the Green LED flashes about once per minute.



3 YEARS LIMITED WARRANTY

The CO alarm is warranted for 3 years (excluding battery) to be free from defects in materials and workmanship from the date of purchase. This only applies if the alarms is used in the normal way and is serviced regularly. The obligations of this warranty, at our discretion, shall be limited to the repair or replacement of any part of the alarm and is also conditional on the CO Alarm's not having been tampered with, modified or subject to attempted repairs. Your statutory rights as a customer are in no way compromised by this Warranty.

Limitation on Liability: The manufacturer will not be liable for the loss or damage of any kind, such as personal injury, property damage including incidental or consequential damages, resulting directly or indirectly from the failure of this product to activate from gas leakage, fire or explosion.

If your Co alarm is faulty, please return with proof of purchase with problem clearly stated and postage prepared to:

Importer: